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April 11, 2012

Mr. Steven L. Renninger
On-Scene Coordinator
Emergency Response Branch
U.S. Environmental Protection Agency Region V
26 West Martin Luther King Drive, Office G-41
Cincinnati, OH 45268

Subject: **Harris-Thomas Industries Site Assessment Report**
Dayton, Montgomery County, Ohio
Technical Direction Document No.: S05-0001-1202-004
WESTON START Contract No.: EP-S5-06-04
Document Control No.: 1736-2A-AVHO

Dear Mr. Renninger:

The Weston Solutions, Inc. (WESTON®), Superfund Technical Assessment and Response Team (START) is submitting the enclosed site assessment report for the Harris-Thomas Industries Site in Dayton, Montgomery County, Ohio. If you have any questions or comments regarding the report or require additional copies, please contact me at (513) 703-3092.

Sincerely,
WESTON SOLUTIONS, INC.

John Sherrard
WESTON START Project Manager

Enclosure

cc: WESTON START DCN File

SITE ASSESSMENT REPORT
FOR THE
HARRIS-THOMAS INDUSTRIES SITE
DAYTON, MONTGOMERY COUNTY, OHIO
SITE ID NO. C5D3

NPL STATUS: NON-NPL

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V
Emergency Response Branch
26 West Martin Luther King Drive, Office G-41
Cincinnati, OH 45268

Prepared by:

WESTON SOLUTIONS, INC.
4710-A Interstate Drive
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WESTON START Project Manager:	John Sherrard
Telephone No.:	(513) 703-3092
U.S. EPA On-Scene Coordinator:	Steven L. Renninger

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John Sherrard
WESTON START Project Manager

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	Degree Fahrenheit
ALS	ALS Environmental Laboratory
CFR	*Code of Federal Regulations*
DFD	Dayton Fire Department
ERRS	Emergency Rapid and Response Services
HTDFC	Harris-Thomas Drop Forge Company
MEK	Methyl ethyl ketone
mg/L	Milligram per liter
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
Ohio EPA	Ohio Environmental Protection Agency
OSC	On-Scene Coordinator
PCB	Polychlorinated biphenyl
PID	Photoionization detector
Poly	Polyethylene
PPE	Personal protective equipment
ppm	Part per million
PVC	Polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
RSL	Regional Screening Level
START	Superfund Technical Assessment and Response Team
SU	Standard unit
TCLP	Toxicity Characteristic Leaching Procedure
TDD	Technical Direction Document
U.S. EPA	United States Environmental Protection Agency
VOC	Volatile organic compound
WESTON	Weston Solutions, Inc.
XRF	X-Ray Fluorescence

1. INTRODUCTION

The United States Environmental Protection Agency (U.S. EPA) tasked the Weston Solutions, Inc. (WESTON®), Superfund Technical Assessment and Response Team (START) to assist U.S. EPA in performing a site assessment at the Harris-Thomas Industries Site in Dayton, Montgomery County, Ohio (the Site). Specifically, under Technical Direction Document (TDD) No. S05-0001-1202-004, WESTON START was directed to perform the following activities:

- Compile available Site information
- Develop site-specific safety and field sampling plans
- Oversee emergency stabilization activities
- Provide photographic documentation of the Site (see **Appendix A**)
- Collect liquid waste and solid waste samples
- Use an INNOV-X x-ray fluorescence (XRF) unit to field screen on-site soil, floor sweepings, waste piles, and wall solids for heavy metals contamination
- Procure analytical laboratory services
- Validate laboratory analytical data (see **Appendix B**)
- Evaluate potential threats posed by the Site to the public health or welfare of the United States or the environment
- Prepare and deliver this site assessment report

The site assessment was performed to evaluate Site conditions and the potential for imminent and substantial threats to the public health or welfare of the United States or the environment in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Title 40 of the *Code of Federal Regulations* (40 CFR), Part 300.415(b)(2).

This site assessment report is organized into the following sections:

- **Introduction** – Provides a brief description of the objective and scope of the site assessment
- **Site Background** – Discusses the Site description and history, including emergency stabilization activities
- **Site Assessment Activities** – Discusses Site observations and sampling and field screening methods used during the site assessment

- **Analytical Results** – Discusses analytical results for samples collected during the site assessment
- **Threats to Human Health and the Environment** – Identifies conditions at the Site that warrant a removal action under the NCP
- **Conclusions** – Summarizes the site assessment findings and presents conclusions based on these findings

Figures and tables are presented after the conclusions section. **Appendix A** provides photographic documentation of Site conditions and activities during the site assessment, and **Appendix B** provides the data validation report and validated analytical results for samples collected during the site assessment.

2. SITE BACKGROUND

This section discusses the Site description and history.

2.1 SITE DESCRIPTION

The Site is located at 1400 East 1st Street in Dayton, Montgomery County, Ohio (zip code 45212). According to historical records, the Site location also has been listed at 126 Harshman Street. The Site's geographical coordinates are 39° 45' 53.2938" North latitude and 84° 10' 11.643" West longitude. **Figure 2-1** shows the Site location. The Site is bordered to the north by East 1st Street and a vacant lot beyond, to the east by Schumacher Crane Rental and BBC Converters, to the south by Service Master Clean/Angler Construction and East 2nd Street beyond, and to the west by Harshman Street and First Street Recycling beyond. **Figure 2-2** shows the Site layout. Commercial and industrial businesses are located within 500 feet of the Site, and the closest residences are located within 1,000 feet south of the Site. The Mad River, which discharges into the Great Miami River, is located approximately 0.3 mile northwest of the Site.

The Site contains seven separate, mostly one-story buildings (one composed of approximately eight additions) of various construction. The buildings encompass 10 areas (Areas A through J; see **Figure 2-2**) that cover approximately 30,000 square feet on approximately 2.5 acres.

2.2 SITE HISTORY

Historic records indicate that the Site has been occupied by an oil distributor (1898), metal foundries (early 1900s), boiler makers (early 1900s), painting contractors (1960s), a metal treating company (1970s), and metal forging companies (1920s to 2006). From at least 1960 to 1998, the Harris Thomas Drop Forge Company (HTDFC) owned the Site. In 1998, the HTDFC transferred the Site property to Harris-Thomas Industries, Inc., which used the Site to manufacture steel parts for the automotive and other industries. In 2006, Harris-Thomas Industries, Inc. vacated the Site.

On February 2, 2012, the Dayton Fire Department (DFD) and the Ohio Environmental Protection Agency (Ohio EPA) investigated a report of oil leaking from a Site building onto a City of Dayton right-of-way sidewalk along Harshman Street. Site trespassing and vandalism (from metal scrappers) resulted in the release of transformer oil potentially containing polychlorinated biphenyls (PCB) to the Area G building (see **Figure 2-2**), its roof, and the adjacent sidewalk. The DFD and Ohio EPA inspected the building and observed not only the oil released from transformers on the roof but also numerous abandoned 55-gallon drums, containers, and pits of unknown liquids. The Ohio EPA requested emergency stabilization assistance from the U.S. EPA.

On February 3, 2012, the U.S. EPA, WESTON START and U.S. EPA's Emergency Rapid Response Services (ERRS) contractor (Environmental Quality Management) mobilized to the Site to conduct emergency stabilization activities. **Appendix A** provides photographic documentation of Site conditions during the emergency stabilization activities. The purpose of these activities was to limit the impact of the oil released from the transformers on the building roof. WESTON START observed four transformers in an unsecured, fenced-in cage on the northwestern portion of the building containing the Die Shop/Shipping area (Area G in **Figure 2-2**). The ERRS contractor bulked oil-contaminated roofing debris and oil-stained soil into 55-gallon drums and used absorbent pads and a shop vacuum to collect pools of oil from the roof. The ERRS contractor secured the transformer cage with a chain and lock and placed absorbent boom around the transformer cage, into the building roof gutters, and on the ground where the oil was flowing off the Site property.

On February 3, 2012, the Ohio EPA formally requested assistance from the U.S. EPA to determine if the Site meets the criteria for a removal action.

On February 6, 2012, the DFD requested assistance from the U.S. EPA to evaluate the Site for an emergency removal action to remove the hazardous waste on Site.

On March 19, 2012, the DFD, Ohio EPA, and City of Dayton Division of Environmental Management responded to another transformer oil release at the Site. Trespassers had again accessed the Site property and climbed onto the roof of the Area G building. The transformer cage secured on February 3, 2012, had been cut and removed, and one of the four remaining transformers had been tipped over, drained of oil, and stolen by the scrappers for the copper wiring inside the unit. Oil inside the transformer had released onto the building roof, spilled off the roof, and flowed onto the ground and off the Site onto a City of Dayton sidewalk right-of-way. The Ohio EPA again requested emergency assistance from the U.S. EPA to stabilize the release.

On March 20, 2012, WESTON START and the ERRS contractor remobilized to the Site and observed that the fencing around the transformers had been breached, one of the transformers had been stolen, and oil in the transformer had been released (see **Appendix A**). The ERRS contractor applied absorbent floor-dry material to areas of pooled oil and stained areas on the roof, ground, and sidewalk along Harshman Street. The ERRS contractor also replaced absorbent boom impacted by the previous release and added additional layers of absorbent boom to the point where the release exited the Site.

Since February 12, the Site has had at least two more reported incidents of breaking and entering and vandalism from metal scrappers. A fence around the Site property is supposed to prevent access, but the fence has numerous breaches.

3. SITE ASSESSMENT ACTIVITIES

On February 10 and March 7, 2012, WESTON START conducted a site assessment to document Site conditions and evaluate the Site for a potential time-critical removal action. The Site

observations and sampling and field screening activities are discussed below. **Appendix A** provides photographic documentation of Site conditions and activities during the site assessment.

3.1 SITE OBSERVATIONS

On February 10, 2012, WESTON START mobilized to the Site to conduct a site reconnaissance. On-site personnel reviewed and signed the site-specific health and safety plan. The DFD provided access to the Site property and security during the site reconnaissance, which was conducted to document Site observations and determine potential sampling locations. During the site reconnaissance, WESTON START used a MultiRAE outfitted with a photoionization detector (PID) to screen the breathing zone in each Site building for volatile organic compounds (VOC), percent oxygen, lower explosive limit, carbon monoxide, and hydrogen sulfide. WESTON START also used a Ludlum Model 19 Micro-R radiation meter to screen gamma radiation levels in each Site building. No breathing zone readings or radiation levels exceeded background readings taken from areas outside the Site.

During the site reconnaissance, WESTON START observed that the Site was abandoned and that utilities at the Site had been shut off. The Site contained seven separate, mostly one-story buildings (one composed of approximately eight additions) of various construction. Leaks were observed in the roof of each Site building. Commercial properties were located within 500 feet of the western and eastern Site perimeters, and residential areas were located within 1,000 feet of the southern Site perimeter. The commercial property on the western perimeter (First Street Recycling) was a very active scrap recycling facility. Open overhead bay doors and side doors to the buildings were observed. Evidence of trespassing was observed throughout the entire Site. The Site was fenced, but WESTON START observed numerous breaches in the fence along Harshman Street and East 1st Street. The breaches could have provided Site access to the metal scrappers discussed in Section 2.2.

In the Site buildings, WESTON START observed and documented the presence of approximately 25 abandoned 55-gallon drums, 25 abandoned containers (having a volume of 5 gallons or less), and approximately 10 pits containing unknown liquids. Many drums and

containers were deteriorated. Some were labeled "Flammable Liquid," "Corrosive," "Hydraulic Oil," "Muriatic Acid," and "Lacquer Thinner."

In Area A, WESTON START observed six small pits containing unknown liquid and debris. The liquid appeared similar to hydraulic oil. The area also contained four 55-gallon drums.

In Area B, two large pits were observed. One pit contained liquid with a thick oil sheen, and the other contained unknown solids. Area B also contained piles of floor sweepings and apparent foundry sand on the building support beams along the walls. The area also contained approximately 10 55-gallon drums and containers (having a volume of 5 gallons or less).

In Area D, WESTON START observed two large pits on the first floor of the building. The pits contained unknown solids and numerous deceased animals. The building also contained many 55-gallon drums and containers (having a volume of 5 gallons or less) and one compressed gas cylinder.

3.2 SAMPLING AND FIELD SCREENING ACTIVITIES

This section discusses the sampling activities conducted on February 10, 2012, and the XRF field screening and sampling activities conducted on March 7, 2012. **Appendix B** provides the data validation report and validated laboratory analytical results for all samples collected during the site assessment.

February 10, 2012, Sampling Activities

To evaluate if the Site poses imminent and substantial threats to the public health or welfare of the United States or the environment, WESTON START collected 7 liquid waste samples from various pits and containers and 14 solid waste samples from floor sweepings, pits, waste piles, soil outside the buildings, wall solids, and other solids. **Table 3-1** summarizes the investigative waste samples collected from the Site. Sampling activities were conducted in Level D personal protective equipment (PPE) in accordance with the approved site-specific health and safety plan.

For each drum or container from which liquid samples were collected, either the headspace was screened for VOCs using a MultiRAE PID or the contents were field tested using a pH test strip.

Fresh sampling gloves were donned before sampling activities began at each new sampling location as necessary. Liquid waste samples were collected either (1) using polyvinyl chloride (PVC) piping with a sample jar duct-taped to the end, (2) using a dedicated drum thief, or (3) by pouring the liquid sample directly into glass sample jars if the sampled container was 5 gallons or less. Solid waste samples were collected using a flat-edged shovel or disposable polyethylene (poly) scoops and composited in an aluminum foil pan. Each sample is described below.

Sample S-1 consisted of a dark liquid from a pit in Area A having the appearance of used oil. No PID VOC readings were observed.

Sample S-2 consisted of a dark liquid from another pit in Area A having the appearance of used oil. No PID VOC readings were observed.

Sample S-3 consisted of floor sweepings from Area A. WESTON START used a flat-edged shovel to collect a composite sample of 12 floor sweeping aliquots. The 12 aliquots were placed into an aluminum foil pan and homogenized using a disposable poly scoop before placement into an 8-ounce sample jar.

Sample S-4 consisted of a clear liquid with an oily sheen from a pit in Area B. The pit contained an unknown liquid with two layers, a clear liquid and a dark, floating liquid. No PID VOC readings were observed.

Sample S-5 consisted of floor sweepings from Area B. WESTON START used a flat-edged shovel to collect a composite sample of 12 floor sweeping aliquots. The 12 aliquots were placed into an aluminum foil pan and homogenized using a disposable poly scoop before placement into an 8-ounce sample jar.

Sample S-6 consisted of a dark solid from a pit in Area B. The pit was dry and appeared to have once contained machinery. The solid waste sample had the consistency of foundry sand.

Sample S-7 consisted of a clear liquid from a 5-gallon container on the floor of Area F labeled “Lacquer Thinner.” The PID yielded a VOC reading exceeding 700 parts per million (ppm).

Sample S-8 consisted of a clear liquid from a 1-gallon container in Area D labeled "Muriatic Acid." The pH test strip indicated a pH between 0 and 1 standard unit (SU).

Sample S-9 consisted of floor sweepings from the first floor of Area D. WESTON START used a flat-edged shovel to collect a composite sample of 12 floor sweeping aliquots. The 12 aliquots were placed into an aluminum foil pan and homogenized using a disposable poly scoop before placement into an 8-ounce sample jar.

Sample S-10 was collected from a pile of foundry sand 5 feet from a stormwater drain north of Area G and south of Area D.

Sample S-11 consisted of a clear liquid from a 16-ounce container in Area D labeled "Cleaner Degreaser." The PID yielded a VOC reading exceeding 500 ppm.

Sample S-12 consisted of a clear liquid from a 16-ounce container in Area D labeled "Primer." The PID yielded a VOC reading exceeding 500 ppm.

Sample S-13 was a composite surficial soil sample from the area around an outdoor transformer located east of Area E. The soil appeared to be stained with transformer oil.

Sample S-14 consisted of another floor sweeping sample from the first floor of Area D. WESTON START used a flat-edged shovel to collect a composite sample of 12 floor sweeping aliquots. The 12 aliquots were placed into an aluminum foil pan and homogenized using a disposable poly scoop before placement into an 8-ounce sample jar.

All samples were submitted under chain of custody to ALS Environmental Laboratory (ALS) in Cincinnati, Ohio, under analytical TDD No. S05-0001-1202-005. The samples were analyzed for one or more of the following parameters: PCBs, total Resource Conservation and Recovery Act (RCRA) metals, Toxicity Characteristic Leaching Procedure (TCLP) RCRA metals, flashpoint, TCLP VOCs, and pH. WESTON START requested a turnaround time of 5 business days. Section 4 discusses the analytical results.

March 7, 2012, XRF Field Screening and Sampling Activities

On March 7, 2012, WESTON START and U.S. EPA On-Scene Coordinator (OSC) Renninger re-mobilized to the Site to use an INNOV-X XRF analyzer to field screen 34 locations throughout the Site. The purpose of the field screening event was to determine if there was widespread heavy metals contamination in on-site soil, floor sweepings, waste piles, and wall solids. **Table 3-2** summarizes the XRF field screening results, and **Figure 3-1** shows the XRF field screening locations. The total lead results were compared to U.S. EPA's Regional Screening Level (RSL) for the protection of groundwater. The lead RSL was chosen as the screening level because numerous open bay doors at the Site buildings and the buildings' leaking roofs could allow floor sweepings and wall solids in the buildings to migrate to the environment. The U.S. EPA Superfund Program developed the RSLs as risk-based soil screening levels considered protective of groundwater that may be used to set initial cleanup criteria or identify areas, contaminants, and conditions that require further federal attention. A total of 24 XRF total lead readings (from 818 to 57,629 ppm) exceeded the U.S. EPA lead RSL of 800 ppm (industrial properties). XRF screening results for waste piles within 5 feet of stormwater drains were as high as 1,035 ppm. XRF screening results for total chromium were as high as 21,617 ppm in wall solids (foundry sand) in Area B.

At the request of the OSC, WESTON START collected composite solid waste samples (samples S-15 through S-21) from seven of the XRF screening locations with elevated total chromium concentrations, elevated total lead concentrations, or both. Fresh sampling gloves were donned before sampling activities began at each new sampling location as necessary. The solid waste samples were collected using disposable poly scoops and composited in a dedicated aluminum pan. After the samples were composited, a second XRF reading was taken to verify the elevated total chromium and total lead concentrations (see **Table 3-2**). Each sample and the second XRF field screening results are described below.

Sample S-15 was a composite sample of floor sweepings collected from between two large pits in Area B. The XRF readings were 19,017 ppm for total chromium and 1,888 ppm for total lead.

Sample S-16 was a composite sample of wall solids from Area I. The XRF readings were 13,665 ppm for total chromium and 1,076 ppm for total lead.

Sample S-17 was a composite sample of wall solids from the southern wall in Area B. The XRF readings were 21,617 ppm for total chromium and 1,348 ppm for total lead.

Sample S-18 was a composite sample of solids collected from the incinerator chimney attached to the Area G building. The XRF readings were 5,807 ppm for total chromium and 18,546 ppm for total lead.

Sample S-19 was a composite sample of foundry sand next to the stormwater drain north of the shed and south of Area D. The XRF readings were 6,085 ppm for total chromium and 893 ppm for total lead.

Sample S-20 was a composite sample of foundry sand from a pile north of the eastern large pit in Area B. The XRF readings were 8,152 ppm for total chromium and 1,437 ppm for total lead.

Sample S-21 was a composite sample of wall solids from the northern wall in Area B. The XRF readings were 17,384 ppm for total chromium and 2,812 ppm for total lead.

All samples were submitted under chain of custody to ALS under analytical TDD No. S05-0001-1202-005. The samples were analyzed for TCLP chromium and TCLP lead. WESTON START requested a turnaround time of 5 business days. Section 4 discusses the analytical results.

4. ANALYTICAL RESULTS

WESTON START collected 7 liquid waste and 14 solid waste samples from the Site for analysis by ALS in Cincinnati, Ohio. Liquid waste samples S-1, S-2, and S-4 and solid waste samples S-3, S-9, and S-13 were analyzed for PCBs using U.S. EPA Method 8082. Liquid waste samples S-1, S-2, and S-4 and solid waste samples S-3, S-5, S-9, S-13, and S-14 were analyzed for total RCRA metals using U.S. EPA Methods 6010B, 7471A and 7470A. Solid waste samples S-3, S-5, S-6, S-9, S-10, S-13, and S-14 were analyzed for TCLP RCRA metals using U.S. EPA Methods 1311, 6010B, and 7470A. Liquid waste sample S-7 was analyzed for TCLP VOCs using U.S. EPA Methods 1311 and 8260B. Liquid sample S-8 was analyzed for corrosivity (pH)

using U.S. EPA Method 9040B. Liquid waste samples S-7, S-11, and S-12 were analyzed for ignitability (flashpoint) using U.S. EPA Method 1010. **Table 4-1** summarizes the waste sample analytical results. **Appendix B** provides the data validation reports and validated laboratory analytical results for the samples.

Analytical results for ignitability, corrosivity, and toxicity and were compared to the hazardous waste criteria outlined in 40 CFR, Part 261, Subpart C. Laboratory analytical results exceeding the hazardous waste criteria are summarized below.

- **Ignitability – Flashpoint:** All flashpoint results for liquid waste samples S-7, S-11, and S-12 were less than 140 degrees Fahrenheit (°F), with a low flashpoint of less than 58 °F. Therefore, according to 40 CFR 261.21, these liquid waste samples represent materials that meet the definition of a hazardous waste by virtue of the characteristic of ignitability.
- **Corrosivity - pH:** The pH result for liquid waste sample S-8 was less than 2 SUs. Therefore, according to 40 CFR 261.22, the waste sample represents a material that meets the definition of a hazardous waste by virtue of the characteristic of corrosivity.
- **Toxicity - TCLP VOCs:** Liquid waste sample S-7 contained a TCLP methyl ethyl ketone (MEK) concentration of 170,000 milligrams per liter (mg/L). This result exceeds the TCLP MEK regulatory limit of 200.0 mg/L. Therefore, according to 40 CFR 261.24, liquid waste sample S-7 represents a material that meets the definition of a hazardous waste by virtue of the characteristic of toxicity.

5. THREATS TO HUMAN HEALTH AND THE ENVIRONMENT

Factors to be considered when determining the appropriateness of a potential removal action at a site are delineated in the NCP at 40 CFR 300.415(b)(2). The factors applicable to the Site are summarized below.

- **Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances or pollutants or contaminants**

  During the site assessment conducted on February 10 and March 7, 2012, WESTON START documented abandoned chemical wastes in containers containing ignitable, corrosive, and toxic hazardous wastes and floor sweeping and wall solids containing heavy metals.

  Site assessment analytical results for liquid waste samples S-7, S-11, and S-12 document flashpoints of less than 140 °F. According to 40 CFR 261.21, these liquid waste samples represent materials that meet the definition of a hazardous waste by virtue of the characteristic of ignitability (D001).

Site assessment analytical results for liquid waste sample S-8 document a pH level of less than 2.0 SUs. According to 40 CFR 261.22, the waste sample represents a material that meets the definition of a hazardous waste by virtue of the characteristic of corrosivity (D002).

Site assessment analytical results for liquid waste sample S-7 document a TCLP MEK concentration of 170,000 mg/L. This result exceeds the TCLP MEK regulatory limit of 200.0 mg/L. Therefore, according to 40 CFR 261.24, liquid waste sample S-7 represents a material that meets the definition of a hazardous waste by virtue of the characteristic of toxicity (D035). The health effects of MEK are summarized below.

MEK is a colorless liquid with a sharp, sweet odor. Nearly half of its use is in paints and other coatings because it quickly evaporates and dissolves many substances. It also is used in glues and as a cleaning agent. Known health effects to people exposed to MEK include irritation of the nose, throat, skin, and eyes. MEK is not considered a lethal breathing hazard, but when it is inhaled with other harmful chemicals, it can increase the amount of damage.

During the site assessment, WESTON START used an XRF analyzer to field screen 34 locations throughout the Site. The purpose of the field screening event was to determine if there was widespread heavy metals contamination in on-site soil, floor sweepings, waste piles, and wall solids. The total lead results were compared to U.S. EPA's RSLs for the protection of groundwater. The lead RSL was chosen as the screening level because numerous open bay doors at the Site buildings and the buildings' leaking roofs could allow floor sweepings and wall solids in the buildings to migrate to the environment. A total of 24 XRF total lead readings (from 818 to 57,629 ppm) exceeded the U.S. EPA lead RSL of 800 ppm (industrial properties). XRF screening results for waste piles within 5 feet of stormwater drains were as high as 1,035 ppm. XRF screening results for total chromium were as high as 21,617 ppm in wall solids (foundry sand) in Area B. Floor sweepings, waste piles, and wall solids containing chromium and lead could migrate through leaking roofs and open overhead bay doors and side doors to the buildings into the environment and on-site stormwater drains.

During the site assessment, many drums and containers at the Site were observed to be deteriorated. Leaks were observed in the roof of each Site building. Evidence of trespassing was observed throughout the entire Site. The Site was fenced but had numerous breaches. Commercial businesses were located within 500 feet of the Site, and residences were located within 1,000 feet of the Site. The Site has a history of trespassing. Two trespassing events in February and March 2012 each resulted in the release of transformer oil (potentially containing PCBs) into the environment. Trespassing could result in an accidental or intentional release of hazardous materials and contact with hazardous materials. The nearness of residential areas and commercial businesses to the vacant and abandoned Site greatly increases the likelihood of human health and environmental impacts if a release occurs. In addition, floor sweepings, waste piles, and wall solids containing chromium and lead could migrate through leaking roofs and open overhead bay doors and side doors to the buildings into the environment and

on-site stormwater drains. Potential exposure could result in imminent and substantial threats to the public health or welfare of the United States or the environment.

- **Actual or potential contamination of drinking water supplies or sensitive ecosystems**

  During the site assessment, WESTON START used an XRF analyzer to field screen 34 locations throughout the Site. The purpose of the field screening event was to determine if there was widespread heavy metals contamination in on-site soil, floor sweepings, waste piles, and wall solids. The total lead results were compared to U.S. EPA's RSLs for the protection of groundwater. The lead RSL was chosen as the screening level because numerous open bay doors at the Site buildings and the buildings' leaking roofs could allow floor sweepings and wall solids in the buildings to migrate to the environment. A total of 24 XRF total lead readings (from 818 to 57,629 ppm) exceeded the U.S. EPA lead RSL of 800 ppm (industrial properties). XRF screening results for waste piles within 5 feet of stormwater drains were as high as 1,035 ppm. XRF screening results for total chromium were as high as 21,617 ppm in wall solids (foundry sand) in Area B. Floor sweepings, waste piles, and wall solids containing chromium and lead could migrate through leaking roofs and open overhead bay doors and side doors to the buildings into the environment and into on-site stormwater drains. The site sits overtop Dayton's sole-source aquifer, which provides drinking water to the area. The potential exists that heavy-metal contamination could exit the facility and contaminate the surrounding soil which could then potentially migrate into the shallow groundwater and into the City of Dayton's sole-source aquifer.

- **Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release**

  During the site assessment, WESTON START observed and documented the presence of approximately 25 abandoned 55-gallon drums, 25 abandoned containers (having a volume of 5 gallons or less), and approximately 10 pits containing unknown liquids. Many drums and containers deteriorated. Some were labeled "Flammable Liquid, "Corrosive," "Hydraulic Oil," "Muriatic Acid," and "Lacquer Thinner."

  Site assessment sampling results confirm the presence of ignitable, corrosive, and toxic (TCLP MEK) hazardous wastes in containers at the Site. The containers pose a threat of release if left in place. In addition, XRF readings document elevated total chromium and total lead concentrations in waste piles, floor sweepings, and wall solids throughout the Site.

- **Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released**

  Southwestern Ohio receives a substantial amount of precipitation during spring, and winter temperatures normally are below freezing, with regular snowfall. Weather conditions will contribute to the further deterioration of on-site buildings and on-site drums and containers of wastes through freezing and thawing. The Site has been abandoned, and the electricity service has been turned off. During the site assessment, building doorways were open and leaks were observed in the roof of each Site building.

Site assessment XRF readings for total chromium were as high as 7,085 ppm and for total lead were as high as 1,035 ppm in waste piles within 5 feet of a stormwater drain. Rainwater entering the buildings could cause the migration of floor sweepings, waste piles, and wall solids containing chromium into the environment.

- **Threat of fire or explosion**

  Site assessment analytical results indicate that materials in abandoned containers at the Site contain ignitable (flammable) waste and pose a threat of fire or explosion. Site assessment flashpoint results for three liquid waste samples were below 140 °F, indicating that these samples represent materials that meet the definition of hazardous waste by virtue of the characteristic of ignitability (D001). If a fire or explosion were to occur, contaminants could become airborne and affect the nearby population.

- **The availability of other appropriate federal or state response mechanisms to respond to the release**

  Ohio EPA does not have the resources to respond to this Site. In a letter dated February 3, 2012, Ohio EPA formally requests assistance from the U.S. EPA to determine if the Site meets the criteria for a removal action.

6. CONCLUSIONS

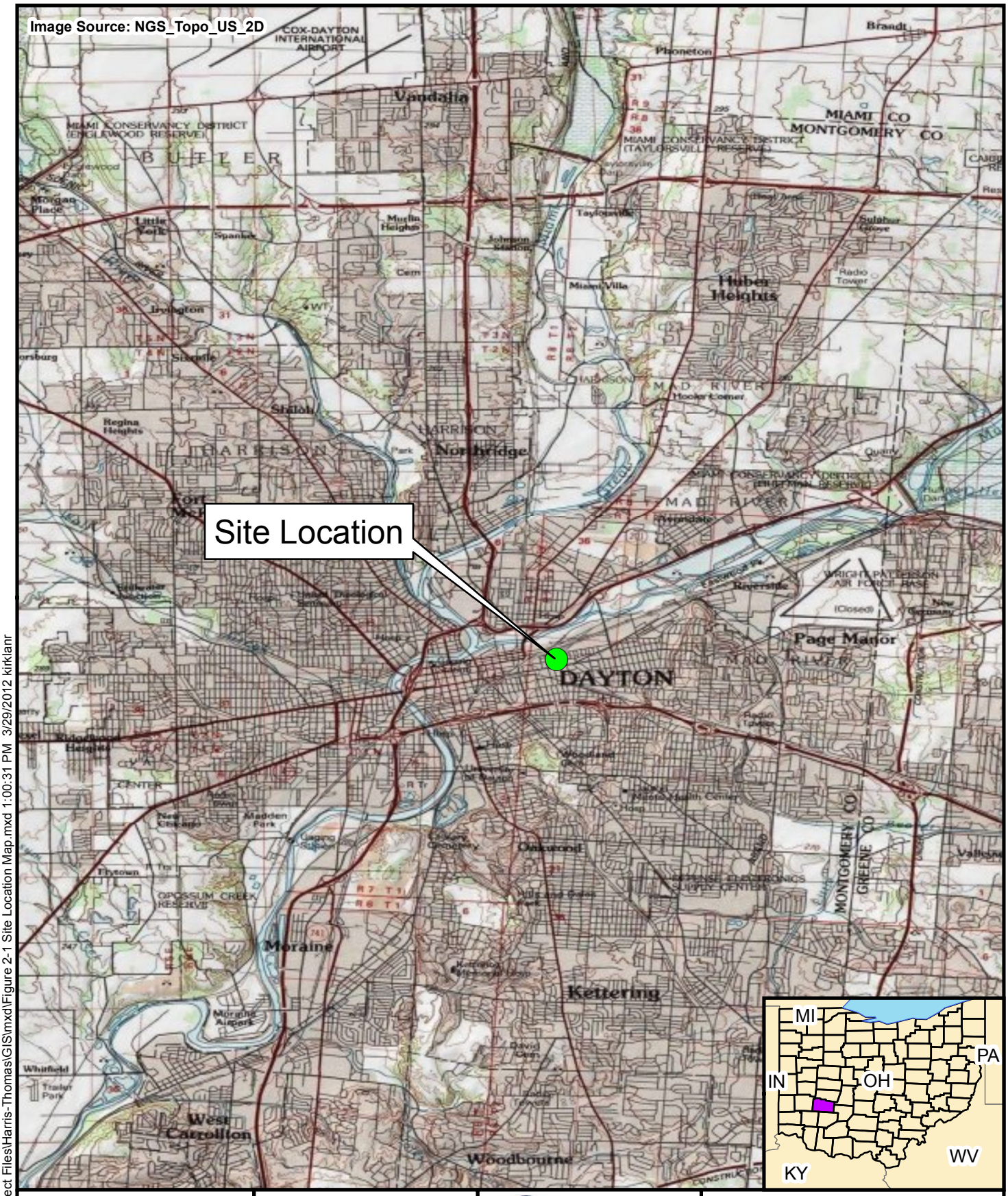
On February 10 and March 7, 2012, U.S. EPA and WESTON START conducted a site assessment to document Site conditions and evaluate the Site for a potential time-critical removal action. During the site assessment, WESTON START observed and documented the presence of approximately 25 55-gallon drums, approximately 25 small containers (having a volume of 5 gallons or less), 10 pits containing unknown liquids, and one compressed gas cylinder. WESTON START collected 7 liquid waste samples and 14 solid waste samples from containers, floor sweepings, wall solids, and waste piles at the Site. Based on sample analytical results, the containers contain ignitable, corrosive, and toxic wastes. In addition, XRF readings document widespread heavy metal contamination (chromium and lead) in floor sweepings, waste piles, and wall solids throughout the Site.

Hazardous wastes identified at the Site exhibit the following characteristics:

- Ignitability (D001)
- Corrosivity (D002)
- Toxicity (TCLP MEK [D035])

Based on the analytical results and Site conditions observed during the site reconnaissance and site assessment, the Site meets six of the criteria for a removal action pursuant to 40 CFR 300.415(b)(2). Therefore, the Site poses imminent and substantial threats to the public health or welfare of the United States or the environment.

FIGURES

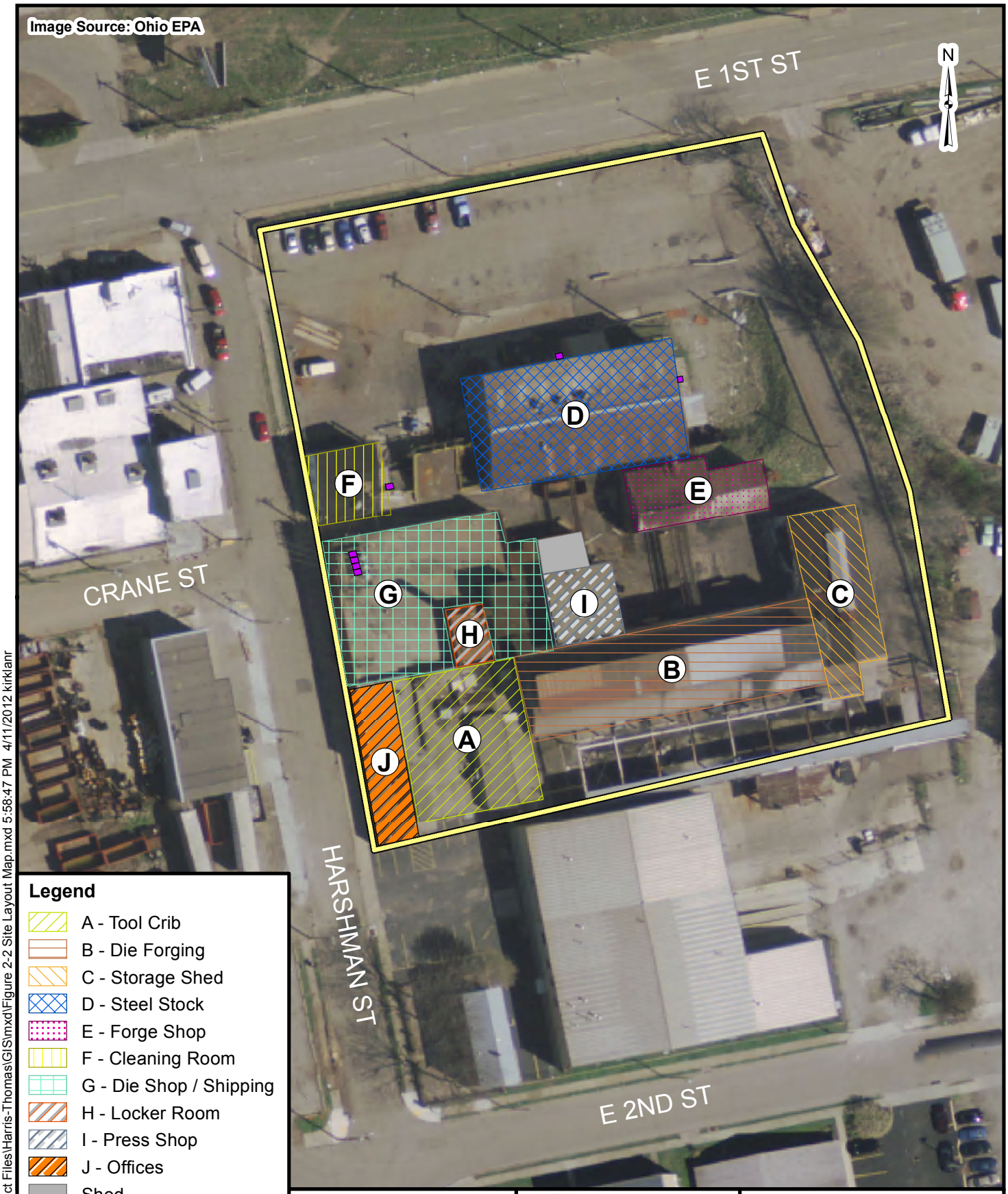


FILE: C:\START Project Files\Harris-Thomas\GIS\mxd\Figure 2-1 Site Location Map.mxd 1:00:31 PM 3/29/2012 kirklanr

Prepared for:
U.S. EPA REGION V
Contract No.: EP-S5-06-04
TDD: S05-0001-1202-004
DCN: 1736-2A-AVHO

Prepared By:
WESTON SOLUTIONS, INC
4710-A Interstate Drive
Cincinnati, Ohio 45246

Figure 2-1
Site Location Map
Harris-Thomas Industries Site
Dayton, Montgomery County, Ohio



Legend

- A - Tool Crib
- B - Die Forging
- C - Storage Shed
- D - Steel Stock
- E - Forge Shop
- F - Cleaning Room
- G - Die Shop / Shipping
- H - Locker Room
- I - Press Shop
- J - Offices
- Shed
- Transformer
- Site Boundary

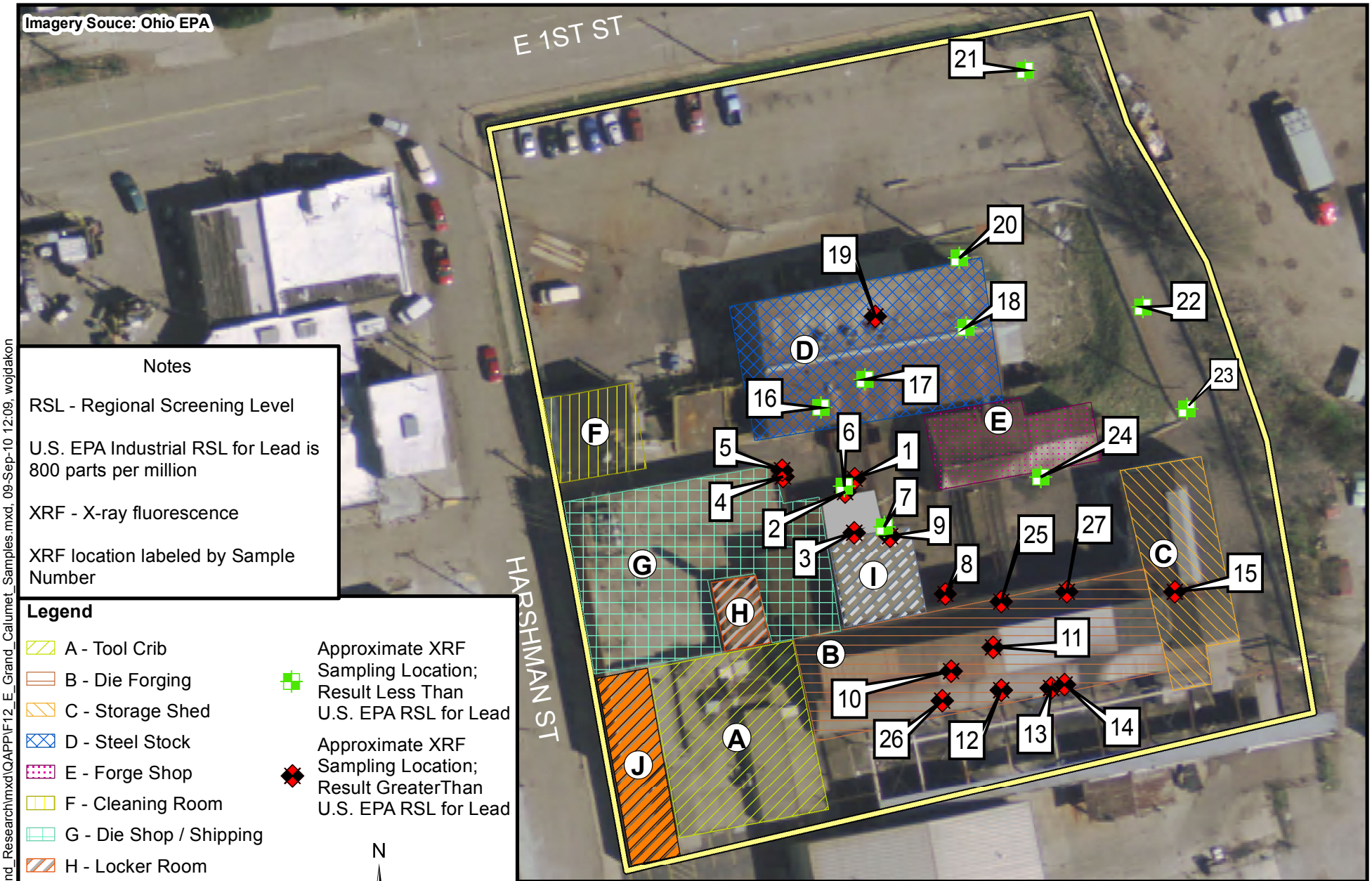
0 70 Feet

FILE: C:\START Project Files\Harris-Thomas\GIS\mxd\Figure 2-2 Site Layout Map.mxd 5:58:47 PM 4/11/2012 kirklanr

Prepared for:
U.S. EPA REGION V
Contract No.: EP-S5-06-04
TDD: S05-0001-1202-004
DCN: 1736-2A-AVHO

Prepared By:
WESTON SOLUTIONS, INC
4710-A Interstate Drive
Cincinnati, Ohio 45246

Figure 2-2
Site Layout Map
Harris-Thomas Industries Site
Dayton, Montgomery County, Ohio



Notes

RSL - Regional Screening Level

U.S. EPA Industrial RSL for Lead is 800 parts per million

XRF - X-ray fluorescence

XRF location labeled by Sample Number

Legend

- A - Tool Crib
- B - Die Forging
- C - Storage Shed
- D - Steel Stock
- E - Forge Shop
- F - Cleaning Room
- G - Die Shop / Shipping
- H - Locker Room
- I - Press Shop
- J - Offices
- Shed
- Site Boundary

Approximate XRF Sampling Location; Result Less Than U.S. EPA RSL for Lead

Approximate XRF Sampling Location; Result GreaterThan U.S. EPA RSL for Lead

N

0 60 Feet

Prepared For:
U.S. EPA REGION V
Contract No.: EP-S5-06-04
TDD: S05-0001-1202-004
DCN: 1736-2A-AVHO

Prepared By:
WESTON SOLUTIONS, INC.
4710-A Interstate Drive
Cincinnati, Ohio 45246

Figure 3-1
XRF Field Screening Location Map
Harris-Thomas Industries Site
Dayton, Montgomery County, Ohio

File: D:\Sediment_Amend_Research\mxd\QAPP\F12_E_Grand_Calumet_Samples.mxd, 09-Sep-10 12:09, wojdakon

TABLES

Table 3-1
Waste Sampling Summary
Harris-Thomas Industries Site
Dayton, Montgomery County, Ohio

Field Sample ID No.	Sampling Date	Sample Type	Sampling Location	Analytical Parameter(s)
S-1	2/10/12	Grab, liquid field sample	Area A -- small pit	PCBs and Total RCRA Metals
S-2	2/10/12	Grab, liquid field sample	Area A -- small pit	PCBs and Total RCRA Metals
S-3	2/10/12	Composite, solid field sample	Area A -- floor sweepings	PCBs, Total and TCLP RCRA Metals
S-4	2/10/12	Grab, liquid field sample	Area B -- large western pit	PCBs and Total RCRA Metals
S-5	2/10/12	Composite, solid field sample	Area B -- floor sweepings	Total and TCLP RCRA Metals
S-6	2/10/12	Grab, solid field sample	Area B -- large eastern pit	TCLP RCRA Metals
S-7	2/10/12	Grab, liquid field sample	Area D -- 5-gallon container labeled "Lacquer Thinner"	Flashpoint and TCLP VOCs
S-8	2/10/12	Grab, liquid field sample	Area D -- 1-gallon container labeled "Muriatic Acid"	pH
S-9	2/10/12	Composite, solid field sample	Area D -- floor sweepings	PCBs, Total and TCLP RCRA Metals
S-10	2/10/12	Grab, solid field sample	Foundary sand piles within 5 feet of stormwater drain	TCLP RCRA Metals
S-11	2/10/12	Grab, liquid field sample	Area D -- 16-ounce container labeled "Cleaner Degreaser"	Flashpoint
S-12	2/10/12	Grab, liquid field sample	Area D -- 16-ounce container labeled "Primer"	Flashpoint
S-13	2/10/12	Composite, solid field sample	Soil in front of large transformer located east of Area E	PCBs, Total and TCLP RCRA Metals
S-14	2/10/12	Composite, solid field sample	Area D -- floor sweepings	Total and TCLP RCRA Metals
S-15	3/7/12	Composite, solid field sample	Area B -- floor sweepings collected between the two large pits	TCLP Chromium and TCLP Lead
S-16	3/7/12	Composite, solid field sample	Area I -- composite sample of wall solids	TCLP Chromium and TCLP Lead
S-17	3/7/12	Composite, solid field sample	Area B -- composite sample of wall solids from the southern wall	TCLP Chromium and TCLP Lead
S-18	3/7/12	Composite, solid field sample	Composite sample of solids from the incinerator chimney attached to Area G building	TCLP Chromium and TCLP Lead
S-19	3/7/12	Composite, solid field sample	Composite sample of foundry sand next to stormwater drain located north of shed and south of Area D	TCLP Chromium and TCLP Lead
S-20	3/7/12	Composite, solid field sample	Area B -- composite sample from pile of foundry sand north of the eastern large pit	TCLP Chromium and TCLP Lead
S-21	3/7/12	Composite, solid field sample	Area B -- composite sample of wall solids from the northern wall	TCLP Chromium and TCLP Lead

Notes:
ID = Identification
PCB = Polychlorinated biphenyl
RCRA = Resource Conservation and Recovery Act
TCLP = Toxicity Characteristic Leaching Procedure
VOC = Volatile organic compound

Table 3-2
XRF Field Screening Results Summary
Harris-Thomas Industries Site
Dayton, Montgomery County, Ohio

XRF Screening Location No.	Total Chromium Reading (ppm)	Total Lead Reading (ppm)	Location	Description
1	6,561	**818**	North of storage shed	Outside on the ground
2	7,085	**1,035**	Near stormwater drain	Within 5 feet of stormwater drain
3	9,293	**968**	Storage shed north of Area I	Floor debris
4	ND	**7,453**	Incinerator chimney attached to Area G building	Debris in chimney
5	ND	**1,752**	Incinerator chimney attached to Area G building	White solid in chimney
6	7,270	672	North of Area I	Slag pile within 5 feet of stormwater drain
7	3,008	284	East of storage shed	Floor debris
8	19,529	**870**	East of Area I	Drum debris on top of soil
9	16,686	**1,379**	Area I	Floor debris
10	18,873	**1,474**	Area B	Floor debris
11	11,735	**1,501**	Area B	Floor debris
12	9,518	**1,165**	Area B	Floor debris
13	13,501	**57,629**	Area B	Wall solids
14	13,147	**49,048**	Area B	Wall solids
15	2,444	**1,680**	Next to oven in Area C	Floor debris
16	727	61	Area D	Floor debris
17	ND	15	Area D	Floor debris
18	ND	14	Area D	Floor debris
19	8,263	**1,408**	Area D	Floor debris
20	419	310	Area D	Next to transformer
21	388	165	Next to north gate	Driveway soil
22	518	72	East driveway	Driveway soil
23	478	99	East driveway	Driveway soil
24	1,087	386	South of Area E	Outside on the ground
25	4,077	**823**	Area B	Floor debris
26	15,277	**3,175**	Area B	Wall debris
27	17,384	**2,812**	Area B	Wall debris
S-15	19,017	**1,888**	Area B	Composite sample of floor sweepings between two large pits
S-16	13,665	**1,076**	Area I	Composite sample of wall solids
S-17	21,617	**1,348**	Area B	Composite sample of wall solids from southern wall
S-18	5,807	**18,546**	Incinerator chimney attached to Area G building	Composite sample of solids in chimney

Table 3-2
XRF Field Screening Results Summary
Harris-Thomas Industries Site
Dayton, Montgomery County, Ohio

XRF Screening Location No.	Total Chromium Reading (ppm)	Total Lead Reading (ppm)	Location	Description
S-19	6,085	**893**	Next to stormwater drain	Composite sample of foundry sand next to the stormwater drain north of shed and south of Area D
S-20	8,152	**1,437**	Area B	Composite sample of foundry sand north of eastern large pit
S-21	17,384	**2,812**	Area B	Composite sample of wall solids from the northern wall

Notes:

Shaded and bolded results exceed the 800-ppm U.S. EPA Regional Screening Level for lead at industrial properties.

ND = Not detected

ppm = Part per million

U.S. EPA = United States Environmental Protection Agency

XRF = X-ray fluorescence

Table 4-1
Waste Sampling Results Summary
Harris-Thomas Industries Site
Dayton, Montgomery County, Ohio

Analysis	Regulatory Limit	Field Sample ID No.	S-1	S-2	S-3	S-4	S-5	S-6	S-7
		Matrix	Liquid	Liquid	Solid	Liquid	Solid	Solid	Liquid
		Unit							
Flashpoint - Closed Cup	< 140	°F	NA	NA	NA	NA	NA	NA	**< 58**
pH (liquids only)	≤ 2 or ≥ 12.5	SU	NA	NA	NA	NA	NA	NA	NA
PCBs	50	mg/kg	U	U	U	U	NA	NA	NA
TCLP VOCs									
2-Butanone (MEK)	200.0	mg/L	NA	NA	NA	NA	NA	NA	**170,000**
Total RCRA Metals									
Chromium	None	mg/kg	U	4.6 J	770	5.2 J	610	NA	NA
Lead	None	mg/kg	0.8	1.1 J	170 J	49	590	NA	NA
TCLP RCRA Metals									
Chromium	5.0	mg/L	NA	NA	U	NA	U	U	NA
Lead	5.0	mg/L	NA	NA	U	NA	U	U	NA

Analysis	Regulatory Limit	Field Sample ID No.	S-8	S-9	S-10	S-11	S-12	S-13	S-14
		Matrix	Liquid	Solid	Solid	Liquid	Liquid	Solid	Solid
		Unit							
Flashpoint - Closed Cup	< 140	°F	NA	NA	NA	**120**	**< 58**	NA	NA
pH (liquids only)	≤ 2 or ≥ 12.5	SU	**1.0**	NA	NA	NA	NA	NA	NA
PCBs	50	mg/kg	NA	U	NA	NA	NA	U	NA
TCLP VOCs									
2-Butanone (MEK)	200.0	mg/L	NA	NA	NA	NA	NA	NA	NA
Total RCRA Metals									
Chromium	None	mg/kg	NA	730	NA	NA	NA	97	840
Lead	None	mg/kg	NA	48	NA	NA	NA	72	44
TCLP RCRA Metals									
Chromium	5.0	mg/L	NA	U	0.11 J	NA	NA	U	U
Lead	5.0	mg/L	NA	U	U	NA	NA	U	U

Table 4-1
Waste Sampling Results Summary
Harris-Thomas Industries Site
Dayton, Montgomery County, Ohio

Analysis	Regulatory Limit	Field Sample ID No.	S-15	S-16	S-17	S-18	S-19	S-20	S-21
		Matrix	Solid	Solid	Solid	Solid	Solid	Solid	Solid
		Unit							
Flashpoint - Closed Cup	< 140	°F	NA	NA	NA	NA	NA	NA	NA
pH (liquids only)	≤ 2 or ≥ 12.5	SU	NA	NA	NA	NA	NA	NA	NA
PCBs		mg/kg	NA	NA	NA	NA	NA	NA	NA
TCLP VOCs									
2-Butanone (MEK)	200.0	mg/L	NA	NA	NA	NA	NA	NA	NA
Total RCRA Metals									
Chromium	None	mg/kg	NA	NA	NA	NA	NA	NA	NA
Lead	None	mg/kg	NA	NA	NA	NA	NA	NA	NA
TCLP RCRA Metals									
Chromium	5.0	mg/L	0.15	ND	0.33	ND	ND	ND	ND
Lead	5.0	mg/L	1.0	ND	0.52	0.72	ND	0.11	1.1

Notes:

Shaded and bolded results exceed the hazardous waste regulatory limits in Title 40 of the *Code of Federal Regulations*, Part 261, Subpart C.

< = Less than
≤ = Less than or equal to
≥ = Greater than or equal to
°F = Degree Fahrenheit
ID = Identification
J = Analyte detected below quantitation limit
MEK = Methyl ethyl ketone
mg/L = Milligram per liter
NA = Not analyzed
ND = Not detected at the reporting limit
RCRA = Resource Conservation and Recovery Act
TCLP = Toxicity Characteristic Leaching Procedure
U = Analyzed for but not detected above the method detection limit
VOC = Volatile organic compound

APPENDIX A
PHOTOGRAPHIC DOCUMENTATION

Site: Harris-Thomas Industries Site
Photograph No.: 1 **Date:** 2/3/12
Direction: Down **Photographer:** John Sherrard
Subject: Transformers on roof of Area G building

Site: Harris-Thomas Industries Site
Photograph No.: 2 **Date:** 2/3/12
Direction: Down **Photographer:** John Sherrard
Subject: One of six small pits containing unknown liquids in Area A

Site: Harris-Thomas Industries Site
Photograph No.: 3 **Date:** 2/3/12
Direction: South **Photographer:** John Sherrard
Subject: Inside the Area A building

Site: Harris-Thomas Industries Site
Photograph No.: 4 **Date:** 2/3/12
Direction: East **Photographer:** John Sherrard
Subject: Inside the Area B building

Site: Harris-Thomas Industries Site
Photograph No.: 5 **Date:** 2/3/12
Direction: North **Photographer:** John Sherrard
Subject: Inside the Area D building

Site: Harris-Thomas Industries Site
Photograph No.: 6 **Date:** 2/3/12
Direction: North **Photographer:** John Sherrard
Subject: Transformer oil staining on roof of the Area G building

Site: Harris-Thomas Industries Site
Photograph No.: 7 **Date:** 2/3/12
Direction: West **Photographer:** John Sherrard
Subject: Transformer oil staining on roof and standing oil in roof gutters of Area G building

Site: Harris-Thomas Industries Site
Photograph No.: 8 **Date:** 2/3/12
Direction: North **Photographer:** John Sherrard
Subject: Transformer oil staining on City of Dayton right-of-way sidewalk

Site: Harris-Thomas Industries Site
Photograph No.: 9 **Date:** 2/4/12
Direction: West **Photographer:** John Sherrard
Subject: Transformer cage secured and absorbent boom deployed during ERRS stabilization activities

Site: Harris-Thomas Industries Site
Photograph No.: 10 **Date:** 2/10/12
Direction: North **Photographer:** John Sherrard
Subject: Container from which investigative waste liquid sample S-7 was collected; sample had flashpoint less than 58 ºF and TCLP MEK concentration of 170,000 mg/L

Site: Harris-Thomas Industries Site
Photograph No.: 11 **Date:** 2/10/12
Direction: North **Photographer:** John Sherrard
Subject: Container from which investigative waste liquid sample S-8 was collected; sample had a pH of 1.0 SU

Site: Harris-Thomas Industries Site
Photograph No.: 12 **Date:** 2/10/12
Direction: North **Photographer:** John Sherrard
Subject: Containers from which investigative liquid waste samples S-11 and S-12 were collected, which had flashpoints of 120 ºF and less than 58 ºF, respectively

Site: Harris-Thomas Industries Site
Photograph No.: 13 **Date:** 2/10/12
Direction: West **Photographer:** John Sherrard
Subject: Lead-contaminated solid waste within 5 feet of stormwater drain

Site: Harris-Thomas Industries Site
Photograph No.: 14 **Date:** 3/20/12
Direction: West **Photographer:** John Sherrard
Subject: Vandalized transformer cage; transformer oil released onto roof

Site: Harris-Thomas Industries Site
Photograph No.: 15 **Date:** 3/20/12
Direction: East **Photographer:** John Sherrard
Subject: As part of the second stabilization event, ERRS contractor placed absorbent boom to prevent future transformer oil releases from migrating off site

Site: Harris-Thomas Industries Site
Photograph No.: 16 **Date:** 3/20/12
Direction: North **Photographer:** John Sherrard
Subject: As part of the second stabilization event, ERRS contractor spread absorbent material on transformer oil release area

APPENDIX B
DATA VALIDATION REPORT AND VALIDATED ANALYTICAL RESULTS

HARRIS-THOMAS INDUSTRIES
DAYTON, OHIO
DATA VALIDATION REPORT

Date: March 1, 2012
Laboratory: ALS Environmental (ALS), Cincinnati, Ohio
Laboratory Project #: 1202249
Data Validation Performed By: Lisa Graczyk, Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START)
Weston Analytical Work Order #/TDD #: 20405.016.001.1736.00/S05-0001-1202-005

This data validation report has been prepared by WESTON START under the START III Region V contract. This report documents the data validation for 3 oil, 4 waste liquid, and 7 waste solid samples collected for the Harris-Thomas Industries Site Assessment that were analyzed for the following parameters and U.S. Environmental Protection Agency (U.S. EPA) methods:

- Toxicity Characteristic Leaching Procedure (TCLP) Volatile Organic Compounds (VOC) by SW-846 Methods 1311 and 8260B
- Polychlorinated Biphenyls (PCB) by SW-846 Method 8082
- Metals by SW-846 Methods 6010B, 7471A, and 7470A
- TCLP Metals by SW-846 Methods 1311, 6010B, and 7470A
- Ignitability by SW-846 Method 1010
- Corrosivity by SW-846 Methods 9040B

A level II data package was requested from ALS. The data validation was conducted in general accordance with the U.S. EPA "Contract Laboratory Program National Functional Guidance for Superfund Organic Methods Data Review" dated June 2008 and "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2010. The Attachment contains the results summary sheets with the hand-written qualifiers applied during data validation.

Data Validation Report
Harris-Thomas Industries Site
ALS Environmental
Laboratory Project #: 1202249

TCLP VOCs by SW-846 METHODS 1311 AND 8260B

1. Samples

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Analyzed
S-7	1202249-07	Liquid	2/10/2012	2/13/2012

2. Holding Times

The sample was analyzed within the required holding time limit of 14 days from sample collection.

3. Blanks

A method blank was analyzed with the TCLP VOC analysis. The method blank was free of target compound contamination above the reporting limit.

4. Surrogate Results

The surrogate recovery results were within the laboratory-established quality control (QC) limits.

5. Laboratory Control Sample (LCS) Results

The LCS recoveries were within laboratory QC limits.

6. Matrix Spike (MS) Results

A site-specific MS was analyzed using sample S-7 as the spiked sample. The percent recoveries were within QC limits for target compounds.

7. Overall Assessment

The TCLP VOC data are acceptable for use based on the information received.

Data Validation Report
Harris-Thomas Industries Site
ALS Environmental
Laboratory Project #: 1202249

PCBs BY SW-846 METHOD 8082

1. Samples

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
S-1	1202249-01	Oil	2/10/2012	2/14/2012	2/17/2012
S-2	1202249-02	Oil	2/10/2012	2/14/2012	2/17/2012
S-3	1202249-03	Solid	2/10/2012	2/15/2012	2/17/2012
S-4	1202249-04	Oil	2/10/2012	2/14/2012	2/17/2012
S-9	1202249-09	Solid	2/10/2012	2/15/2012	2/17/2012
S-13	1202249-13	Solid	2/10/2012	2/15/2012	2/17/2012

2. Holding Times

The samples were analyzed within the required holding time limit of 14 days from sample collection to extraction and 40 days from extraction to analysis.

3. Blanks

Method blanks were analyzed with the PCB analyses. The method blanks were free of target compound contamination above the reporting limits.

4. Surrogate Results

The surrogate recovery was within QC limits.

5. LCS Results

The percent recoveries and RPDs for the LCS and LCS duplicate (LCSD) results were within the laboratory-established QC limits.

6. MS and MSD Results

Site-specific MS and MSDs were not analyzed with the PCB analyses. No qualifications are required.

7. Overall Assessment

The PCB data are acceptable for use based on the information received.

Data Validation Report
Harris-Thomas Industries Site
ALS Environmental
Laboratory Project #: 1202249

TOTAL METALS BY SW-846 METHODS 6010B, 7471A, AND 7470A

1. Samples

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Analyzed
S-1	1202249-01	Oil	2/10/2012	2/13/2012 – 2/14/2012
S-2	1202249-02	Oil	2/10/2012	2/13/2012 – 2/14/2012
S-3	1202249-03	Solid	2/10/2012	2/20/2012 – 2/21/2012
S-4	1202249-04	Oil	2/10/2012	2/13/2012 – 2/14/2012
S-5	1202249-05	Solid	2/10/2012	2/20/2012 – 2/21/2012
S-9	1202249-09	Solid	2/10/2012	2/20/2012 – 2/21/2012
S-13	1202249-13	Solid	2/10/2012	2/20/2012 – 2/21/2012
S-14	1202249-14	Solid	2/10/2012	2/20/2012 – 2/21/2012

2. Holding Times

The samples were analyzed within the required holding time limit of 28 days from sample collection to analysis for mercury and 180 days from sample collection to analysis for all other metals.

3. Blank Results

Method blanks were analyzed with the metals analysis. The blanks were free of target analyte contamination above the reporting limits. Some metals were detected below the reporting limits in the method blanks. In most instances, the sample concentrations were either non-detect or much higher than the blank concentrations and no qualifications were required. The exceptions were arsenic and barium in samples S-1 and S-4 which were flagged "U" as not detected because they were less than 10 times the blank concentration.

4. LCS Results

The LCS recoveries were within the laboratory-established QC limits.

5. MS and MSD Results

Site-specific MS and MSDs were analyzed with the total metals analysis. Most recoveries were within QC limits. In some instances, the spike amount was more than 4 time lower than the sample concentration and no qualifications were required. The exceptions were lead and

selenium in the MS/MSD of sample S-3. Results for lead and selenium in sample S-3 were flagged "J" as estimated due to potential matrix interference.

7. Overall Assessment

The metals data are acceptable for use as qualified based on the information received.

TCLP METALS BY SW-846 METHODS 1311, 6010B, AND 7470A

1. Samples

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Analyzed
S-3	1202249-03	Solid	2/10/2012	2/14/2012 – 2/15/2012
S-5	1202249-05	Solid	2/10/2012	2/14/2012 – 2/15/2012
S-6	1202249-06	Solid	2/10/2012	2/15/2012
S-9	1202249-09	Solid	2/10/2012	2/15/2012
S-10	1202249-10	Solid	2/10/2012	2/15/2012
S-13	1202249-13	Solid	2/10/2012	2/15/2012
S-14	1202249-14	Solid	2/10/2012	2/15/2012

2. Holding Times

The samples were analyzed within the required holding time limit of 28 days from sample collection to analysis for mercury and 180 days from sample collection to analysis for all other metals.

3. Blank Results

Method blanks were analyzed with the TCLP metals analysis. The blanks were free of target analyte contamination above the reporting limits. Some metals were detected below the reporting limits in the method blanks. However, the sample concentrations were either non-detect or much higher than the blank concentrations and no qualifications were required.

4. LCS Results

The LCS recoveries were within the laboratory-established QC limits.

5. MS and MSD Results

Site-specific MS and MSDs were analyzed with the TCLP metals analysis. The recoveries and RPDs were within QC limits.

7. Overall Assessment

The TCLP metals data are acceptable for use based on the information received.

GENERAL CHEMISTRY PARAMETERS (Ignitability by 1010 and Corrosivity by 9040B)

1. Samples

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Analyzed	Parameter Analyzed
S-7	1202249-07	Liquid	2/10/2012	2/14/2012	Ignitability
S-8	1202249-08	Liquid	2/10/2012	2/13/2012	Corrosivity
S-11	1202249-11	Liquid	2/10/2012	2/14/2012	Ignitability
S-12	1202249-12	Liquid	2/10/2012	2/14/2012	Ignitability

2. Holding Times

The holding times were acceptable for all analyses.

Note that the laboratory flagged the pH result with an "H" to indicate that it was analyzed outside holding time. The method holding time for pH is "as soon as possible" and this is generally accepted to mean within at least 24 hours for water samples. Because this sample was a highly concentrated waste from a drum, this holding time limit is excessive. The pH analysis was performed within 3 days which is acceptable for the waste sample matrix.

3. Overall Assessment

The ignitability and pH data are acceptable for use based on the information received.

Data Validation Report
Harris-Thomas Industries Site
ALS Environmental
Laboratory Project #: 1202249

ATTACHMENT

ALS ENVIRONMENTAL
RESULTS SUMMARY WITH QUALIFIERS

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405.
Work Order: 1202249
Sample ID: S-1
Lab ID: 1202249-01
Collection Date: 2/10/2012 11:45 AM
Matrix: OIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS IN OIL			**SW8082**		Prep Date: **2/14/2012**	Analyst: **SAD**
Aroclor 1016	U		5.0	mg/Kg	5	2/17/2012
Aroclor 1221	U		10	mg/Kg	5	2/17/2012
Aroclor 1232	U		5.0	mg/Kg	5	2/17/2012
Aroclor 1242	U		5.0	mg/Kg	5	2/17/2012
Aroclor 1248	U		5.0	mg/Kg	5	2/17/2012
Aroclor 1254	U		5.0	mg/Kg	5	2/17/2012
Aroclor 1260	U		5.0	mg/Kg	5	2/17/2012
Surr: Decachlorobiphenyl	*114*		*70-130*	*%REC*	5	2/17/2012
Surr: Tetrachloro-m-xylene	*106*		*16.8-130*	*%REC*	5	2/17/2012
MERCURY BY CVAA			**SW7471A**		Prep Date: **2/12/2012**	Analyst: **SLW**
Mercury	U		0.28	mg/Kg	1	2/13/2012 07:35 PM
METALS BY ICP			**SW6010B**		Prep Date: **2/13/2012**	Analyst: **TAB**
Arsenic	~~1.4~~	~~J~~ U	**22**	**mg/Kg**	1	2/14/2012 10:07 AM
Barium	~~0.40~~	~~J~~ U	**44**	**mg/Kg**	1	2/14/2012 10:07 AM
Cadmium	**0.044**	J	**4.4**	**mg/Kg**	1	2/14/2012 10:07 AM
Chromium	U		22	mg/Kg	1	2/14/2012 10:07 AM
Lead	**0.80**	J	**22**	**mg/Kg**	1	2/14/2012 10:07 AM
Selenium	U		13	mg/Kg	1	2/14/2012 10:07 AM
Silver	U		4.4	mg/Kg	1	2/14/2012 10:07 AM

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Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405. **Work Order:** 1202249
Sample ID: S-2 **Lab ID:** 1202249-02
Collection Date: 2/10/2012 11:50 AM **Matrix:** OIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS IN OIL			**SW8082**		Prep Date: **2/14/2012**	Analyst: **SAD**
Aroclor 1016	U		2.0	mg/Kg	2	2/17/2012
Aroclor 1221	U		4.0	mg/Kg	2	2/17/2012
Aroclor 1232	U		2.0	mg/Kg	2	2/17/2012
Aroclor 1242	U		2.0	mg/Kg	2	2/17/2012
Aroclor 1248	U		2.0	mg/Kg	2	2/17/2012
Aroclor 1254	U		2.0	mg/Kg	2	2/17/2012
Aroclor 1260	U		2.0	mg/Kg	2	2/17/2012
Surr: Decachlorobiphenyl	*87.6*		*70-130*	*%REC*	2	2/17/2012
Surr: Tetrachloro-m-xylene	*80.4*		*16.8-130*	*%REC*	2	2/17/2012
MERCURY BY CVAA			**SW7471A**		Prep Date: **2/12/2012**	Analyst: **SLW**
Mercury	U		0.26	mg/Kg	1	2/13/2012 07:37 PM
METALS BY ICP			**SW6010B**		Prep Date: **2/13/2012**	Analyst: **TAB**
Arsenic	U		22	mg/Kg	1	2/14/2012 10:26 AM
Barium	**4.2**	J	**44**	**mg/Kg**	1	2/14/2012 10:26 AM
Cadmium	U		4.4	mg/Kg	1	2/14/2012 10:26 AM
Chromium	**4.6**	J	**22**	**mg/Kg**	1	2/14/2012 10:26 AM
Lead	**1.1**	J	**22**	**mg/Kg**	1	2/14/2012 10:26 AM
Selenium	U		13	mg/Kg	1	2/14/2012 10:26 AM
Silver	U		4.4	mg/Kg	1	2/14/2012 10:26 AM

Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405. **Work Order:** 1202249
Sample ID: S-3 **Lab ID:** 1202249-03
Collection Date: 2/10/2012 12:00 PM **Matrix:** BULK

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS BULK			**SW8082**		Prep Date: **2/15/2012**	Analyst: **SAD**
Aroclor 1016	U		1.0	mg/Kg	10	2/17/2012
Aroclor 1221	U		2.1	mg/Kg	10	2/17/2012
Aroclor 1232	U		1.0	mg/Kg	10	2/17/2012
Aroclor 1242	U		1.0	mg/Kg	10	2/17/2012
Aroclor 1248	U		1.0	mg/Kg	10	2/17/2012
Aroclor 1254	U		5.2	mg/Kg	10	2/17/2012
Aroclor 1260	U		5.2	mg/Kg	10	2/17/2012
Aroclor 1262	U		1.0	mg/Kg	10	2/17/2012
Aroclor 1268	U		1.0	mg/Kg	10	2/17/2012
Surr: Decachlorobiphenyl	*82.0*		*22-156*	*%REC*	10	2/17/2012
Surr: Tetrachloro-m-xylene	*104*		*34-145*	*%REC*	10	2/17/2012
TCLP MERCURY BY CVAA			**SW7470A**		Prep Date: **2/14/2012**	Analyst: **SLW**
Mercury	U		0.50	µg/L	1	2/15/2012 10:00 PM
MERCURY BY CVAA			**SW7471A**		Prep Date: **2/20/2012**	Analyst: **SLW**
Mercury	U		0.29	mg/Kg	1	2/20/2012 11:17 PM
METALS BY ICP			**SW6010B**		Prep Date: **2/21/2012**	Analyst: **CEG**
Arsenic	**13**	J	**20**	**mg/Kg**	4	2/21/2012 11:34 AM
Barium	**480**		**10**	**mg/Kg**	1	2/21/2012 10:27 AM
Cadmium	**3.5**		**1.0**	**mg/Kg**	1	2/21/2012 10:27 AM
Chromium	**770**		**5.0**	**mg/Kg**	1	2/21/2012 10:27 AM
Lead	**170** J		**20**	**mg/Kg**	4	2/21/2012 11:34 AM
Selenium	**42** J		**12**	**mg/Kg**	4	2/21/2012 11:34 AM
Silver	**1.9**		**1.0**	**mg/Kg**	1	2/21/2012 10:27 AM
TCLP METALS BY ICP			**SW6010B**		Prep Date: **2/14/2012**	Analyst: **TAB**
Arsenic	U		0.10	mg/L	5	2/14/2012 11:36 PM
Barium	**1.3**		**0.10**	**mg/L**	5	2/14/2012 11:36 PM
Cadmium	U		0.10	mg/L	5	2/14/2012 11:36 PM
Chromium	U		0.10	mg/L	5	2/14/2012 11:36 PM
Lead	U		0.10	mg/L	5	2/14/2012 11:36 PM
Selenium	U		0.10	mg/L	5	2/14/2012 11:36 PM
Silver	U		0.10	mg/L	5	2/14/2012 11:36 PM

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Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405. **Work Order:** 1202249
Sample ID: S-4 **Lab ID:** 1202249-04
Collection Date: 2/10/2012 12:10 PM **Matrix:** OIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS IN OIL			**SW8082**		Prep Date: **2/14/2012**	Analyst: **SAD**
Aroclor 1016	U		1.0	mg/Kg	1	2/17/2012
Aroclor 1221	U		2.0	mg/Kg	1	2/17/2012
Aroclor 1232	U		1.0	mg/Kg	1	2/17/2012
Aroclor 1242	U		1.0	mg/Kg	1	2/17/2012
Aroclor 1248	U		1.0	mg/Kg	1	2/17/2012
Aroclor 1254	U		1.0	mg/Kg	1	2/17/2012
Aroclor 1260	U		1.0	mg/Kg	1	2/17/2012
Surr: Decachlorobiphenyl	*98.4*		*70-130*	*%REC*	1	2/17/2012
Surr: Tetrachloro-m-xylene	*93.0*		*16.8-130*	*%REC*	1	2/17/2012
MERCURY BY CVAA			**SW7471A**		Prep Date: **2/12/2012**	Analyst: **SLW**
Mercury	U		0.28	mg/Kg	1	2/13/2012 07:39 PM
METALS BY ICP			**SW6010B**		Prep Date: **2/13/2012**	Analyst: **TAB**
Arsenic	~~0.78~~	~~J~~ U	**22**	**mg/Kg**	1	2/14/2012 10:33 AM
Barium	~~1.0~~	~~J~~ U	**44**	**mg/Kg**	1	2/14/2012 10:33 AM
Cadmium	**0.17**	J	**4.4**	**mg/Kg**	1	2/14/2012 10:33 AM
Chromium	**5.2**	J	**22**	**mg/Kg**	1	2/14/2012 10:33 AM
Lead	**49**		**22**	**mg/Kg**	1	2/14/2012 10:33 AM
Selenium	U		13	mg/Kg	1	2/14/2012 10:33 AM
Silver	U		4.4	mg/Kg	1	2/14/2012 10:33 AM

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Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405.
Work Order: 1202249
Sample ID: S-5
Lab ID: 1202249-05
Collection Date: 2/10/2012 12:15 PM
Matrix: BULK

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY BY CVAA			**SW7470A**		Prep Date: **2/14/2012**	Analyst: **SLW**
Mercury	U		0.50	µg/L	1	2/15/2012 10:06 PM
MERCURY BY CVAA			**SW7471A**		Prep Date: **2/20/2012**	Analyst: **SLW**
Mercury	U		0.29	mg/Kg	1	2/20/2012 11:20 PM
METALS BY ICP			**SW6010B**		Prep Date: **2/21/2012**	Analyst: **CEG**
Arsenic	**20**		**5.0**	**mg/Kg**	1	2/21/2012 10:55 AM
Barium	**100**		**10**	**mg/Kg**	1	2/21/2012 10:55 AM
Cadmium	**3.6**		**1.0**	**mg/Kg**	1	2/21/2012 10:55 AM
Chromium	**610**		**5.0**	**mg/Kg**	1	2/21/2012 10:55 AM
Lead	**590**		**20**	**mg/Kg**	4	2/21/2012 11:40 AM
Selenium	**47**		**12**	**mg/Kg**	4	2/21/2012 11:40 AM
Silver	**3.1**		**1.0**	**mg/Kg**	1	2/21/2012 10:55 AM
TCLP METALS BY ICP			**SW6010B**		Prep Date: **2/14/2012**	Analyst: **TAB**
Arsenic	U		0.10	mg/L	5	2/14/2012 11:55 PM
Barium	**1.1**		**0.10**	**mg/L**	5	2/14/2012 11:55 PM
Cadmium	U		0.10	mg/L	5	2/14/2012 11:55 PM
Chromium	U		0.10	mg/L	5	2/14/2012 11:55 PM
Lead	U		0.10	mg/L	5	2/14/2012 11:55 PM
Selenium	U		0.10	mg/L	5	2/14/2012 11:55 PM
Silver	U		0.10	mg/L	5	2/14/2012 11:55 PM

Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc

Project: Harris-Thomas Industries Site; Project No.: 20405. **Work Order:** 1202249

Sample ID: S-6 **Lab ID:** 1202249-06

Collection Date: 2/10/2012 12:20 PM **Matrix:** BULK

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY BY CVAA			**SW7470A**		Prep Date: **2/14/2012**	Analyst: **SLW**
Mercury	U		0.50	µg/L	1	2/15/2012 10:08 PM
TCLP METALS BY ICP			**SW6010B**		Prep Date: **2/14/2012**	Analyst: **TAB**
Arsenic	U		0.10	mg/L	5	2/15/2012 12:02 AM
Barium	U		0.10	mg/L	5	2/15/2012 12:02 AM
Cadmium	U		0.10	mg/L	5	2/15/2012 12:02 AM
Chromium	U		0.10	mg/L	5	2/15/2012 12:02 AM
Lead	U		0.10	mg/L	5	2/15/2012 12:02 AM
Selenium	U		0.10	mg/L	5	2/15/2012 12:02 AM
Silver	U		0.10	mg/L	5	2/15/2012 12:02 AM

Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405. **Work Order:** 1202249
Sample ID: S-7 **Lab ID:** 1202249-07
Collection Date: 2/10/2012 12:25 PM **Matrix:** LIQUID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP VOLATILE ORGANIC COMPOUNDS			**SW8260**		Prep Date: **2/13/2012**	Analyst: **LAK**
1,1-Dichloroethene	U		2,500	mg/L	5E+05	2/13/2012 11:25 AM
1,2-Dichloroethane	U		2,500	mg/L	5E+05	2/13/2012 11:25 AM
1,4-Dichlorobenzene	U		2,500	mg/L	5E+05	2/13/2012 11:25 AM
2-Butanone	**170,000**		**25,000**	**mg/L**	5E+06	2/13/2012 12:25 PM
Benzene	U		2,500	mg/L	5E+05	2/13/2012 11:25 AM
Carbon tetrachloride	U		2,500	mg/L	5E+05	2/13/2012 11:25 AM
Chlorobenzene	U		2,500	mg/L	5E+05	2/13/2012 11:25 AM
Chloroform	U		2,500	mg/L	5E+05	2/13/2012 11:25 AM
Tetrachloroethene	U		2,500	mg/L	5E+05	2/13/2012 11:25 AM
Trichloroethene	U		2,500	mg/L	5E+05	2/13/2012 11:25 AM
Vinyl chloride	U		2,500	mg/L	5E+05	2/13/2012 11:25 AM
Surr: Bromofluorobenzene	*101*		*61-131*	*%REC*	5E+05	2/13/2012 11:25 AM
Surr: Dibromofluoromethane	*98.2*		*87-126*	*%REC*	5E+05	2/13/2012 11:25 AM
Surr: Toluene-d8	*104*		*84-111*	*%REC*	5E+05	2/13/2012 11:25 AM
FLASHPOINT			**E1010**			Analyst: **RDN**
Flashpoint	**<58**			**°F**	1	2/14/2012

Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405.
Work Order: 1202249
Sample ID: S-8
Lab ID: 1202249-08
Collection Date: 2/10/2012 12:30 PM
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH			**E9040B**			Analyst: **RDN**
pH	**1.0**	H		**pH Units**	1	2/13/2012

Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405. **Work Order:** 1202249
Sample ID: S-9 **Lab ID:** 1202249-09
Collection Date: 2/10/2012 12:40 PM **Matrix:** BULK

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS BULK			**SW8082**		Prep Date: **2/15/2012**	Analyst: **SAD**
Aroclor 1016	U		0.52	mg/Kg	5	2/17/2012
Aroclor 1221	U		1.0	mg/Kg	5	2/17/2012
Aroclor 1232	U		0.52	mg/Kg	5	2/17/2012
Aroclor 1242	U		0.52	mg/Kg	5	2/17/2012
Aroclor 1248	U		0.52	mg/Kg	5	2/17/2012
Aroclor 1254	U		0.52	mg/Kg	5	2/17/2012
Aroclor 1260	U		0.52	mg/Kg	5	2/17/2012
Aroclor 1262	U		0.52	mg/Kg	5	2/17/2012
Aroclor 1268	U		0.52	mg/Kg	5	2/17/2012
Surr: Decachlorobiphenyl	*94.0*		*22-156*	*%REC*	5	2/17/2012
Surr: Tetrachloro-m-xylene	*101*		*34-145*	*%REC*	5	2/17/2012
TCLP MERCURY BY CVAA			**SW7470A**		Prep Date: **2/14/2012**	Analyst: **SLW**
Mercury	U		0.50	µg/L	1	2/15/2012 10:10 PM
MERCURY BY CVAA			**SW7471A**		Prep Date: **2/20/2012**	Analyst: **SLW**
Mercury	U		0.29	mg/Kg	1	2/20/2012 11:26 PM
METALS BY ICP			**SW6010B**		Prep Date: **2/21/2012**	Analyst: **CEG**
Arsenic	**5.2**		**5.0**	**mg/Kg**	1	2/21/2012 11:01 AM
Barium	U		10	mg/Kg	1	2/21/2012 11:01 AM
Cadmium	**2.9**		**1.0**	**mg/Kg**	1	2/21/2012 11:01 AM
Chromium	**730**		**5.0**	**mg/Kg**	1	2/21/2012 11:01 AM
Lead	**48**		**20**	**mg/Kg**	4	2/21/2012 11:46 AM
Selenium	**45**		**12**	**mg/Kg**	4	2/21/2012 11:46 AM
Silver	**3.2**		**1.0**	**mg/Kg**	1	2/21/2012 11:01 AM
TCLP METALS BY ICP			**SW6010B**		Prep Date: **2/14/2012**	Analyst: **TAB**
Arsenic	U		0.10	mg/L	5	2/15/2012 12:08 AM
Barium	**0.13**		**0.10**	**mg/L**	5	2/15/2012 12:08 AM
Cadmium	U		0.10	mg/L	5	2/15/2012 12:08 AM
Chromium	U		0.10	mg/L	5	2/15/2012 12:08 AM
Lead	U		0.10	mg/L	5	2/15/2012 12:08 AM
Selenium	U		0.10	mg/L	5	2/15/2012 12:08 AM
Silver	U		0.10	mg/L	5	2/15/2012 12:08 AM

Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc

Project: Harris-Thomas Industries Site; Project No.: 20405. **Work Order:** 1202249

Sample ID: S-10 **Lab ID:** 1202249-10

Collection Date: 2/10/2012 12:50 PM **Matrix:** BULK

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY BY CVAA			**SW7470A**		Prep Date: **2/14/2012**	Analyst: **SLW**
Mercury	U		0.50	µg/L	1	2/15/2012 10:12 PM
TCLP METALS BY ICP			**SW6010B**		Prep Date: **2/14/2012**	Analyst: **TAB**
Arsenic	U		0.10	mg/L	5	2/15/2012 12:14 AM
Barium	**0.66**		**0.10**	**mg/L**	5	2/15/2012 12:14 AM
Cadmium	U		0.10	mg/L	5	2/15/2012 12:14 AM
Chromium	**0.11**	J	**0.20**	**mg/L**	5	2/15/2012 12:14 AM
Lead	U		0.10	mg/L	5	2/15/2012 12:14 AM
Selenium	U		0.10	mg/L	5	2/15/2012 12:14 AM
Silver	U		0.10	mg/L	5	2/15/2012 12:14 AM

Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405.
Work Order: 1202249
Sample ID: S-11
Lab ID: 1202249-11
Collection Date: 2/10/2012 01:00 PM
Matrix: LIQUID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
FLASHPOINT			**E1010**			Analyst: **RDN**
Flashpoint	**120**			**°F**	1	2/14/2012

Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405.
Work Order: 1202249
Sample ID: S-12
Lab ID: 1202249-12
Collection Date: 2/10/2012 01:05 PM
Matrix: LIQUID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
FLASHPOINT			**E1010**			Analyst: **RDN**
Flashpoint	**<58**			**°F**	1	2/14/2012

Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405. **Work Order:** 1202249
Sample ID: S-13 **Lab ID:** 1202249-13
Collection Date: 2/10/2012 01:10 PM **Matrix:** BULK

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS BULK			**SW8082**		Prep Date: **2/15/2012**	Analyst: **SAD**
Aroclor 1016	U		0.50	mg/Kg	5	2/17/2012
Aroclor 1221	U		1.0	mg/Kg	5	2/17/2012
Aroclor 1232	U		0.50	mg/Kg	5	2/17/2012
Aroclor 1242	U		0.50	mg/Kg	5	2/17/2012
Aroclor 1248	U		0.50	mg/Kg	5	2/17/2012
Aroclor 1254	U		0.50	mg/Kg	5	2/17/2012
Aroclor 1260	U		0.50	mg/Kg	5	2/17/2012
Aroclor 1262	U		0.50	mg/Kg	5	2/17/2012
Aroclor 1268	U		0.50	mg/Kg	5	2/17/2012
Surr: Decachlorobiphenyl	*93.0*		*22-156*	*%REC*	5	2/17/2012
Surr: Tetrachloro-m-xylene	*74.0*		*34-145*	*%REC*	5	2/17/2012
TCLP MERCURY BY CVAA			**SW7470A**		Prep Date: **2/14/2012**	Analyst: **SLW**
Mercury	U		0.50	µg/L	1	2/15/2012 10:14 PM
MERCURY BY CVAA			**SW7471A**		Prep Date: **2/20/2012**	Analyst: **SLW**
Mercury	**0.22**	J	**0.29**	**mg/Kg**	1	2/20/2012 11:28 PM
METALS BY ICP			**SW6010B**		Prep Date: **2/21/2012**	Analyst: **CEG**
Arsenic	**9.0**	J	**20**	**mg/Kg**	4	2/21/2012 12:03 PM
Arsenic	**8.9**		**5.0**	**mg/Kg**	1	2/21/2012 11:06 AM
Barium	**73**		**9.9**	**mg/Kg**	1	2/21/2012 11:06 AM
Barium	**79**		**40**	**mg/Kg**	4	2/21/2012 12:03 PM
Cadmium	**0.73**	J	**4.0**	**mg/Kg**	4	2/21/2012 12:03 PM
Cadmium	**0.74**	J	**0.99**	**mg/Kg**	1	2/21/2012 11:06 AM
Chromium	**97**		**20**	**mg/Kg**	4	2/21/2012 12:03 PM
Chromium	**97**		**5.0**	**mg/Kg**	1	2/21/2012 11:06 AM
Lead	**72**		**20**	**mg/Kg**	4	2/21/2012 12:03 PM
Lead	**64**		**5.0**	**mg/Kg**	1	2/21/2012 11:06 AM
Selenium	**6.3**	J	**12**	**mg/Kg**	4	2/21/2012 12:03 PM
Selenium	**6.3**		**3.0**	**mg/Kg**	1	2/21/2012 11:06 AM
Silver	U		4.0	mg/Kg	4	2/21/2012 12:03 PM
Silver	U		0.99	mg/Kg	1	2/21/2012 11:06 AM
TCLP METALS BY ICP			**SW6010B**		Prep Date: **2/14/2012**	Analyst: **TAB**
Arsenic	U		0.10	mg/L	5	2/15/2012 12:21 AM
Barium	**0.65**		**0.10**	**mg/L**	5	2/15/2012 12:21 AM
Cadmium	U		0.10	mg/L	5	2/15/2012 12:21 AM
Chromium	U		0.10	mg/L	5	2/15/2012 12:21 AM
Lead	U		0.10	mg/L	5	2/15/2012 12:21 AM
Selenium	U		0.10	mg/L	5	2/15/2012 12:21 AM

Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405.
Work Order: 1202249
Sample ID: S-13
Lab ID: 1202249-13
Collection Date: 2/10/2012 01:10 PM
Matrix: BULK

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Silver	U		0.10	mg/L	5	2/15/2012 12:21 AM

Note:

ALS Environmental

Date: *22-Feb-12*

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405. **Work Order:** 1202249
Sample ID: S-14 **Lab ID:** 1202249-14
Collection Date: 2/10/2012 01:15 PM **Matrix:** BULK

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY BY CVAA			**SW7470A**		Prep Date: **2/14/2012**	Analyst: **SLW**
Mercury	U		0.50	µg/L	1	2/15/2012 10:16 PM
MERCURY BY CVAA			**SW7471A**		Prep Date: **2/20/2012**	Analyst: **SLW**
Mercury	U		0.28	mg/Kg	1	2/20/2012 11:30 PM
METALS BY ICP			**SW6010B**		Prep Date: **2/21/2012**	Analyst: **CEG**
Arsenic	**5.5**		**5.0**	**mg/Kg**	1	2/21/2012 11:12 AM
Barium	U		10	mg/Kg	1	2/21/2012 11:12 AM
Cadmium	**1.5**		**1.0**	**mg/Kg**	1	2/21/2012 11:12 AM
Chromium	**840**		**5.0**	**mg/Kg**	1	2/21/2012 11:12 AM
Lead	**44**		**20**	**mg/Kg**	4	2/21/2012 12:09 PM
Selenium	**48**		**12**	**mg/Kg**	4	2/21/2012 12:09 PM
Silver	**2.3**		**1.0**	**mg/Kg**	1	2/21/2012 11:12 AM
TCLP METALS BY ICP			**SW6010B**		Prep Date: **2/14/2012**	Analyst: **TAB**
Arsenic	U		0.10	mg/L	5	2/15/2012 12:27 AM
Barium	U		0.10	mg/L	5	2/15/2012 12:27 AM
Cadmium	U		0.10	mg/L	5	2/15/2012 12:27 AM
Chromium	U		0.10	mg/L	5	2/15/2012 12:27 AM
Lead	U		0.10	mg/L	5	2/15/2012 12:27 AM
Selenium	U		0.10	mg/L	5	2/15/2012 12:27 AM
Silver	U		0.10	mg/L	5	2/15/2012 12:27 AM

Note:

ALS Environmental

Date: 22-Feb-12

Client: Weston Solutions, Inc
Project: Harris-Thomas Industries Site; Project No.: 20405.
WorkOrder: **1202249**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit

Units Reported	Description
°F	
µg/L	
mg/Kg	
mg/L	
pH Units	

HARRIS-THOMAS INDUSTRIES
DAYTON, OHIO
DATA VALIDATION REPORT

Date: March 14, 2012
Laboratory: ALS Environmental (ALS), Cincinnati, Ohio
Laboratory Project #: 1203172
Data Validation Performed By: Lisa Graczyk, Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START)
Weston Analytical Work Order #/TDD #: 20405.016.001.1736.00/S05-0001-1202-005

This data validation report has been prepared by WESTON START under the START III Region V contract. This report documents the data validation for 7 solid samples collected for the Harris-Thomas Industries Site Assessment that were analyzed for the following parameters and U.S. Environmental Protection Agency (U.S. EPA) methods:

- Toxicity Characteristic Leaching Procedure (TCLP) lead and chromium by SW-846 Methods 1311 and 6010B

A level II data package was requested from ALS. The data validation was conducted in general accordance with the U.S. EPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2010. The Attachment contains the results summary sheets with the hand-written qualifiers applied during data validation.

TCLP LEAD AND CHROMIUM BY SW-846 METHODS 1311 AND 6010B

1. Samples

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Analyzed
S-15	1203172-01	Solid	3/7/2012	3/12/2012
S-16	1203172-02	Solid	3/7/2012	3/12/2012
S-17	1203172-03	Solid	3/7/2012	3/12/2012
S-18	1203172-04	Solid	3/7/2012	3/12/2012
S-19	1203172-05	Solid	3/7/2012	3/12/2012
S-20	1203172-06	Solid	3/7/2012	3/12/2012
S-21	1203172-07	Solid	3/7/2012	3/12/2012

2. Holding Times

The samples were analyzed within the required holding time limit of 180 days from sample collection to analysis for all other metals.

3. Blank Results

Method blanks were analyzed with the TCLP metals analysis. The blanks were free of target analyte contamination above the reporting limits.

4. Laboratory Control Sample (LCS) Results

The LCS recoveries were within the laboratory-established QC limits.

5. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results

Site-specific MS and MSDs were analyzed with the TCLP metals analysis. The recoveries and relative percent differences were within QC limits.

7. Overall Assessment

The TCLP metals data are acceptable for use based on the information received.

ATTACHMENT

ALS ENVIRONMENTAL
RESULTS SUMMARY

13-Mar-2012

Lisa Graczyk/Dynamac
Weston Solutions, Inc
20 North Wacker Drive
Suite 1210
Chicago, IL 60606

Tel: (312) 424-3300
Fax: (312) 424-3330

Re: 20405.016.001.1737.00 Work Order: **1203172**

Dear Lisa,

ALS Environmental received 7 samples on 08-Mar-2012 10:18 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 14.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Rob Nieman

Electronically approved by: Rob Nieman

Rob Nieman
Project Manager

ALS Environmental

Date: 13-Mar-12

Client: Weston Solutions, Inc
Project: 20405.016.001.1737.00
Work Order: **1203172**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1203172-01	S-15	Soil		3/7/2012 13:45	3/8/2012 10:18	☐
1203172-02	S-16	Soil		3/7/2012 14:00	3/8/2012 10:18	☐
1203172-03	S-17	Soil		3/7/2012 14:15	3/8/2012 10:18	☐
1203172-04	S-18	Soil		3/7/2012 14:30	3/8/2012 10:18	☐
1203172-05	S-19	Soil		3/7/2012 14:45	3/8/2012 10:18	☐
1203172-06	S-20	Soil		3/7/2012 15:00	3/8/2012 10:18	☐
1203172-07	S-21	Soil		3/7/2012 15:15	3/8/2012 10:18	☐

Client: Weston Solutions, Inc
Project: 20405.016.001.1737.00
Work Order: 1203172

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

ALS Environmental

Date: *13-Mar-12*

Client: Weston Solutions, Inc
Project: 20405.016.001.1737.00 **Work Order:** 1203172
Sample ID: S-15 **Lab ID:** 1203172-01
Collection Date: 3/7/2012 01:45 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP METALS BY ICP			**SW6010B**		Prep Date: **3/9/2012**	Analyst: **CEG**
Chromium	**0.15**		**0.10**	**mg/L**	5	3/12/2012 11:02 AM
Lead	**1.0**		**0.10**	**mg/L**	5	3/12/2012 11:02 AM

Note:

ALS Environmental

Date: *13-Mar-12*

Client: Weston Solutions, Inc
Project: 20405.016.001.1737.00 **Work Order:** 1203172
Sample ID: S-16 **Lab ID:** 1203172-02
Collection Date: 3/7/2012 02:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP METALS BY ICP			**SW6010B**		Prep Date: **3/9/2012**	Analyst: **CEG**
Chromium	ND		0.10	mg/L	5	3/12/2012 12:13 PM
Lead	ND		0.10	mg/L	5	3/12/2012 12:13 PM

Note:

ALS Environmental

Date: *13-Mar-12*

Client: Weston Solutions, Inc
Project: 20405.016.001.1737.00 **Work Order:** 1203172
Sample ID: S-17 **Lab ID:** 1203172-03
Collection Date: 3/7/2012 02:15 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP METALS BY ICP			**SW6010B**		Prep Date: **3/9/2012**	Analyst: **CEG**
Chromium	**0.33**		**0.10**	**mg/L**	5	3/12/2012 11:19 AM
Lead	**0.52**		**0.10**	**mg/L**	5	3/12/2012 11:19 AM

Note:

ALS Environmental

Date: *13-Mar-12*

Client: Weston Solutions, Inc
Project: 20405.016.001.1737.00 **Work Order:** 1203172
Sample ID: S-18 **Lab ID:** 1203172-04
Collection Date: 3/7/2012 02:30 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP METALS BY ICP			**SW6010B**		Prep Date: **3/9/2012**	Analyst: **CEG**
Chromium	ND		0.10	mg/L	5	3/12/2012 11:25 AM
Lead	**0.72**		**0.10**	**mg/L**	5	3/12/2012 11:25 AM

Note:

ALS Environmental

Date: *13-Mar-12*

Client: Weston Solutions, Inc
Project: 20405.016.001.1737.00 **Work Order:** 1203172
Sample ID: S-19 **Lab ID:** 1203172-05
Collection Date: 3/7/2012 02:45 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP METALS BY ICP			**SW6010B**		Prep Date: **3/9/2012**	Analyst: **CEG**
Chromium	ND		0.10	mg/L	5	3/12/2012 11:31 AM
Lead	ND		0.10	mg/L	5	3/12/2012 11:31 AM

Note:

ALS Environmental

Date: *13-Mar-12*

Client: Weston Solutions, Inc
Project: 20405.016.001.1737.00 **Work Order:** 1203172
Sample ID: S-20 **Lab ID:** 1203172-06
Collection Date: 3/7/2012 03:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP METALS BY ICP			**SW6010B**		Prep Date: **3/9/2012**	Analyst: **CEG**
Chromium	ND		0.10	mg/L	5	3/12/2012 11:37 AM
Lead	**0.11**		**0.10**	**mg/L**	5	3/12/2012 11:37 AM

Note:

ALS Environmental

Date: *13-Mar-12*

Client: Weston Solutions, Inc
Project: 20405.016.001.1737.00 **Work Order:** 1203172
Sample ID: S-21 **Lab ID:** 1203172-07
Collection Date: 3/7/2012 03:15 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP METALS BY ICP			**SW6010B**		Prep Date: **3/9/2012**	Analyst: **CEG**
Chromium	ND		0.10	mg/L	5	3/12/2012 11:43 AM
Lead	**1.1**		**0.10**	**mg/L**	5	3/12/2012 11:43 AM

Note:

ALS Environmental

Date: 13-Mar-12

Client: Weston Solutions, Inc

Work Order: 1203172

Project: 20405.016.001.1737.00

QC BATCH REPORT

Batch ID: **10268** Instrument ID: **ICP3** Method: **SW6010B**

MBLK Sample ID: **MBLK-10268-10268** Units: **mg/L** Analysis Date: **3/12/2012 10:50 AM**

Client ID: Run ID: **ICP3_120312A** SeqNo: **403208** Prep Date: **3/9/2012** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	ND	0.10								
Lead	ND	0.10								

LCS Sample ID: **LCS-10268-10268** Units: **mg/L** Analysis Date: **3/12/2012 10:56 AM**

Client ID: Run ID: **ICP3_120312A** SeqNo: **403209** Prep Date: **3/9/2012** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	1.069	0.10	1.1	0	97.2	80-120	0			
Lead	1.045	0.10	1.1	0	95	80-120	0			

MS Sample ID: **1203172-01A ms** Units: **mg/L** Analysis Date: **3/12/2012 11:08 AM**

Client ID: **S-15** Run ID: **ICP3_120312A** SeqNo: **403211** Prep Date: **3/9/2012** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	1.214	0.10	1.1	0.1508	96.6	75-125	0			
Lead	2.014	0.10	1.1	1.04	88.6	75-125	0			

MSD Sample ID: **1203172-01A msd** Units: **mg/L** Analysis Date: **3/12/2012 11:13 AM**

Client ID: **S-15** Run ID: **ICP3_120312A** SeqNo: **403212** Prep Date: **3/9/2012** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	1.182	0.10	1.1	0.1508	93.7	75-125	1.214	2.66	20	
Lead	1.99	0.10	1.1	1.04	86.4	75-125	2.014	1.18	20	

The following samples were analyzed in this batch:

1203172-01A	1203172-03A	1203172-04A
1203172-05A	1203172-06A	1203172-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Weston Solutions, Inc
Work Order: 1203172
Project: 20405.016.001.1737.00

QC BATCH REPORT

Batch ID: **10269** Instrument ID: **ICP3** Method: **SW6010B**

MBLK Sample ID: **mblk-10269-10269** Units: **mg/L** Analysis Date: **3/12/2012 12:01 PM**

Client ID: Run ID: **ICP3_120312A** SeqNo: **403218** Prep Date: **3/9/2012** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	ND	0.10								
Lead	ND	0.10								

LCS Sample ID: **lcs-10269-10269** Units: **mg/L** Analysis Date: **3/12/2012 12:07 PM**

Client ID: Run ID: **ICP3_120312A** SeqNo: **403219** Prep Date: **3/9/2012** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	1.074	0.10	1.1	0	97.6	80-120	0			
Lead	1.142	0.10	1.1	0	104	80-120	0			

MS Sample ID: **1203172-02a ms** Units: **mg/L** Analysis Date: **3/12/2012 12:19 PM**

Client ID: **S-16** Run ID: **ICP3_120312A** SeqNo: **403221** Prep Date: **3/9/2012** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	1.019	0.10	1.1	0.01318	91.4	75-125	0			
Lead	1.16	0.10	1.1	0.09548	96.8	75-125	0			

MSD Sample ID: **1203172-02A msd** Units: **mg/L** Analysis Date: **3/12/2012 12:24 PM**

Client ID: **S-16** Run ID: **ICP3_120312A** SeqNo: **403222** Prep Date: **3/9/2012** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	1.006	0.10	1.1	0.01318	90.3	75-125	1.019	1.2	20	
Lead	1.153	0.10	1.1	0.09548	96.1	75-125	1.16	0.618	20	

The following samples were analyzed in this batch: 1203172-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Weston Solutions, Inc
Project: 20405.016.001.1737.00
WorkOrder: **1203172**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit

Units Reported	Description
mg/L	

ALS Environmental

Sample Receipt Checklist

Client Name: **WESTON-CHICAGO** Date/Time Received: **08-Mar-12 10:18**

Work Order: **1203172** Received by: **JNW**

Checklist completed by: Steve Wilcox 08-Mar-12 Reviewed by: Kelsey Kennedy 09-Mar-12

eSignature | Date | eSignature | Date

Matrices:

Carrier name: Client

Shipping container/cooler in good condition?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: